

CLAIMS

1. A method of performing a channel switch operation for an access point in a regulatory domain, the regulatory domain having a frequency spreading requirement, the access point being allowed to communicate using allowed channels in a spectrum, the method comprising:

 setting a new channel based on radar detection in a particular sub-band, the new channel being selected from a previously-scanned channel list;

 determining whether the new channel is exempt from radar scan in the regulatory domain;

 if the new channel is exempt, then recommencing normal operation using the new channel;

 if the new channel is not exempt, then

 selecting a temporary channel, wherein the temporary channel is exempt from radar scan, and recommencing normal operation using the temporary channel;

 performing an aggregate background scan on the new channel; and

 if the new channel passes the aggregate background scan, then recommencing normal operation using the new channel.

2. The method of Claim 1, wherein if the new channel is not exempt and if the new channel fails the aggregate background scan, then setting another new channel from the previously-scanned channel list.

3. The method of Claim 1, wherein setting another new channel includes marking a non-occupancy list.

4. The method of Claim 1, wherein the previously-scanned channel list is built using a pseudo-random, weighted algorithm.

5. A method of switching channels for an access point operating in a 5 GHz spectrum, wherein the 5 GHz spectrum includes a first sub-band of 5150-5250 MHz, a second sub-band of 5250-5350 MHz, and a third sub-band of 5470-5725 MHz, the method comprising:

accessing a radar-free channel list;

setting a new channel selected from the radar-free channel list;

if the new channel is in the first sub-band, then beginning normal operation using the new channel without an additional radar scan; and

if the new channel is not in the first sub-band, then beginning normal operation using a temporary channel in the first sub-band, performing an aggregate background radar scan on the new channel, and switching from the temporary channel to the new channel if the aggregate background radar scan finds no radars.

6. The method of Claim 5, wherein if the access point is initially operating in the second sub-band and at least one channel in the radar-free channel list is in the first sub-band, then setting the new channel to a lowest channel in the radar-free channel list.

7. The method of Claim 5, wherein if the access point is initially operating in the second sub-band and no channel in the radar-free channel list is in the first sub-band, then setting the new channel to a highest channel in the radar-free channel list.

8. The method of Claim 5, wherein if the access point is initially operating in the third sub-band, then setting the new channel to a lowest channel in the radar-free channel list.

9. A method of switching channels for an access point operating in a spectrum, wherein the spectrum includes a first radar-exempt sub-band and a second non-radar-exempt sub-band, the method comprising:

accessing a radar-free channel list;

setting a new channel selected from the radar-free channel list;

if the new channel is in the first radar-exempt sub-band, then beginning normal operation using the new channel without an additional radar scan; and

if the new channel is in the second non-radar-exempt sub-band, then beginning normal operation using a temporary channel in the first radar-exempt sub-band, performing an aggregate background radar scan on the new channel, and switching from the temporary channel to the new channel if the aggregate background radar scan finds no radars.

10. The method of Claim 9, wherein if the access point is initially operating in the second non-radar-exempt sub-band and at least one channel in the radar-free channel list is in the first radar-exempt sub-band, then setting the new channel to a lowest channel in the radar-free channel list.

11. The method of Claim 9, wherein if the access point is initially operating in the second non-radar-exempt sub-band and no channel in the radar-free channel list is in the first radar-exempt sub-band, then setting the new channel to one of a highest channel and a lowest channel in the radar-free channel list.